INDEX TO VOL. XLV

SCHOOL SCIENCE AND MATHEMATICS

1945

INDEX BY TITLES

A

Addition Formula for Tangents, A Direct Proof of the. L. M. McFarlan 837
Aeronautics and Implications for High School Teaching, Teacher Training in. V. A. Hines 647
Aircraft Instrumentation. W. W. Davies 136, 215
Aircraft Propeller and the Physics Course, The Modern. Eugene W. Cross .. 819
Algebra and Arithmetic. A. R. Jerbert 528
Algebraic Number Scale, The. A. R. Jerbert 40
American Education Week 765
American Scientist Goes to Chile to Aid in Creation of Brand-New National Resource Through Protection of Sea Birds 37
Analytical Groups IV and V, A Simplified Method for the Determination of. George E. F. Brewer 38
Arches Through the Ages. Application to Geometry. Norma Sleight 21
Astronomical Handbook for the Science Teacher, An. Robert L. Price 834
Atmosphere of Titan, Saturn's Moon, Formed After Satellite Cooled off 408
Atomic Bomb, The. Glen W. Warner 688
Atom Smashing and Its Modern Applications. Robley D. Evans 665
Aviation, Post-War 44
Awards Given, Mining and Metallurgical 556

B

Banking of Curves, An Experiment on the. Walter V. Burg 307
Barometer, A Controllable Demonstration. Homer W. LeSourd 551
Battelle Memorial Institute's Research Program 402
Beekeeping and Physical Therapy, Postwar Jobs in 438
Behavior, Some Notes on. John P. Wessel
  Part One 242
  Part Two 413
  Part Three 515
Bill of Rights of Teachers of Secondary Mathematics 784
Biology and Art, The Correlation of. Alfred F. Nixon 717
Book Clubs for Professional Reading. J. R. Mayor 323
Book Reviews:
  Aircraft Analytic Geometry—Apalategui, Adams. Joseph J. Urbancek 98
  Alignment Charts, Construction and Use—Kraitehik. H. C. Christofferson 386
  Analytic Geometry—Patterson, Hickson. Hill Warren 295
  A New Manual for the Biology Laboratory—Weimer, Core. A. G. Zander 491
  Applied Mathematics for Technical Students—Corrington. Philip Peak .. 678
  Arithmetic for Adults—Bakst. Joseph J. Urbancek 98
  A Start in Meteorology—Spitz. Estil B. Van Dorn 393
  Better Colleges—Better Teachers—Cooper, and Others. Cecil B. Reed .. 782
  Celestial Navigation. A Problem Manual—Hadel. H. R. Voorhees 292
  Chemistry and You, A Textbook for High Schools—Hopkins, Smith, Davis, McGill, Brandbury. A. L. Burlingame 589
  Chemistry of Synthetic Substances—Dreher, Translated by Taylor. John H. Schmidt 97
  Consider the Calendar—Panth. Glen W. Warner 489
  Demonstrations and Laboratory Experiences in the Science of Aeronautics—Christofferson and Others. Cecil B. Read 783
  Dictionary of Engineering and Machine Shop Terms—Sandy, Revised by Berck. Glen W. Warner 781
  Educators Guide to Free Films, 4th Edition—Horkheimer, Differ, Fowlkes. R. E. Schreiber 296
  Elementary Algebra—Edgerton, Carpenter. H. C. Christofferson 679
  Elements of Physics—Fuller, Brownlee, Baker. Glen W. Warner 880
  Engineering Preview, An Introduction to Engineering Including the Necessary Review of Science and Mathematics—Grinter, Holmes, Spencer, Oldenburger, Harris, Kloeffler, Faires. Glen W. Warner 676
  Essential Mathematics—Reeves. Joseph J. Urbancek 197

Evolution, Creation, and Science—Marsh. WILLIAM J. TINKLE 591
Fourier Series—Hardy, Rogosinski. W. T. REID 390
From Copernicus to Einstein—Reichenbach. LUISE LANGE 491
Fundamental Mathematics, Book I—Schorling, Clark, Smith. PHILIP PEAK 293
Fundamental Mathematics, Book II—Schorling, Clark, Smith. PHILIP PEAK 294
Fundamentals of Algebra—Nyberg. GEORGE E. HAWKINS 389
Fundamentals of Algebra, Second Book—Nyberg. CECIL B. READ 781
Fundamentals of Chemistry and Their Applications in Modern Life—Offner. A. L. BURLINGAME 589
Fundamentals of Physics—Dees. GLEN W. WARNER 676
Fundamentals of Physics—Semat. H. R. VOORHEES 588
General Chemistry Problems—Spicer, Taylor, Clary. E. G. MARSHALL 96
General Mathematics in American Colleges—Brown. JOSEPH J. URBANCEK 98
General Meteorology—Byers. H. R. VOORHEES 391
Health for You—Crisp. A. G. ZANDER 490
Intermediate Algebra—Edgerton, Carpenter. H. C. CHRISTOFFERSON 680
Learning to Navigate—Weens, Eberle. H. R. VOORHEES 293
Man and His Biological World—Jean, Harrah, Herman. A. G. ZANDER 490
Man in the Air—Zim. ESTIL B. VAN DORN 392
Mathematics, Industrial Series, 2nd Edition—Breneman. DOYLE F. FRENCH 392
Mathematics of Finance—Raiford. GEORGE E. HAWKINS 881
Metals and Alloys Dictionary—Merlub-Sobel. GLEN W. WARNER 489
Meteorology, A Practical Course in Weather—Brands. H. R. VOORHEES 587
Nautical Mathematics and Marine Navigation—Walling, Hill, Rees. H. C. CHRISTOFFERSON 386
Odd Numbers, or Arithmetic Revisited—McKay. ALBERT R. MAHIN 394
Permanent Learning: A Study in Educational Techniques—Lancelot. RAY C. SOLIDAY 586
Plane and Spherical Trigonometry—Seymour, Smith. HILL WARREN 881
Pre-Service Course in Machine Science—Lebowitz. H. H. SIEMERS 294
Principles of Radio, 5th Edition—Kenney. GLEN W. WARNER 780
Radio: Fundamental Principles and Practices—Almstead, Davis, Stone. GLEN W. WARNER 95
Rockets and Jets—Zim. GLEN W. WARNER 678
Science Year Book of 1945—Ratcliff. GLEN W. WARNER 677
Senior Mathematics—Douglas, Kinney. H. C. CHRISTOFFERSON 387
Shop Job Sheets in Radio—Auble. GLEN W. WARNER 290
Book I, Fundamentals.
Book II, Service Problems.
Short Course in Computation—Upton. JOSEPH J. URBANCEK 197
Simplified Physics—Small, Clark. H. H. SIEMERS 590
Soul of Amber, The Background of Electrical Science—Still. GLEN W. WARNER 488
So You Want to be a Chemist—Coith. E. G. MARSHALL 97
Spherical Trigonometry—Freulich, Shanholt, Seidlin. PHILIP PEAK 590
Steel in Action—Parker. WALTER A. THURBER 96
Telescopes and Accessories—Dimitroff, Baker. GLEN W. WARNER 585
Television Programming and Production—Hubbell. GLEN W. WARNER 880
The Chemical Formulary, Vol. VII—Bennett. GLEN W. WARNER 780
The New Applied Mathematics—Lasley, Mudd. GEORGE E. HAWKINS 880
Theory of Functions—Knopp, Translated by Bagemihl. CECIL B. READ 781
The Philosophy of Bertrand Russell—Schlipp. JOSEPH D. ELDER 388
The Radio Amateur's Handbook, 21st Edition—Headquarters Staff of American Radio Relay League. GLEN W. WARNER 95
The Rainbow Series—Adventures in Science—Carpenter and Others. GLEN W. WARNER 196
They Hop and Crawl—Morris. HOWARD F. WRIGHT 291
Today's Geometry—Reichgott, Spiller. GEORGE E. HAWKINS 389
Turtles—Bronson. GLEN W. WARNER 680
20th Century Engineering—Tupholme. WALTER A. THURBER 292
Vitalized Fundamentals of Electricity—Carleton. ESTIL B. VAN DORN 393
Vitalized Fundamentals of Machines—Carleton. ESTIL B. VAN DORN 393
Books and Pamphlets Received. GLEN W. WARNER . 194, 289, 487, 584, 573, 779, 878

C

Camp Nature Program, Some Factors Influencing Success of. DWIGHT E. SOLLBERGER 740
Cargo Section for Planes, Quick-Interchangeable 833
Catalog, A New 241
Central Association Has a Job for All. WALTER H. CARNAHAN, President 199
Central Association of Science and Mathematics Teachers. HAROLD H. METCALF, Secretary 177
Biology Section—ETHEL SCHIERBAUM, Secretary 182
Chemistry Section—WALTER GEISLER, Secretary 184
Elementary Science Section—HILDEGARD C. PIEPER, Secretary 184
Geography Section—EMILIE HUCK, Secretary 185
Mathematics Section—G. A. WALDORF, Secretary 185
Physics Section—E. G. PLASTERER, Secretary 187
Elementary School Group—PAULINE ROYT, Secretary 188
Junior High School Group—G. P. CAHOON, Chairman 189
Junior College Group—PAUL TRUMP, Secretary 189
Conservation Group—F. OLIN CAPPS, Chairman 190
Central Association of Science and Mathematics, Teachers Board of Directors Meeting, May 12, 1945. HAROLD H. METCALF, Secretary 681
Chemical Industries Will Speed up Research with End of War 210
Chemist in the Petroleum Industry, The. GUSTAV EGLOFF 112
Chemistry and Romance. AMBER BALDWIN 87
Chemistry Program at East Technical High School. The. E. GRIFFIN PIERCE 231
Children's Interests in Science as Indicated by Choices of Reading Materials. VIVIAN D. VON QUALEN AND PAUL E. KAMBLY 798
Chinese Five Element Theory, The. EUGENE W. BLANK 864
Chipped Glass Floral Designs 797
Chronological Survey of Published Research Studies Relating to Biological Materials in Newspapers and Magazines, A. W. EDGAR MARTIN 543
Circuit for Frequency Modulation. A New 786
Circuit Practice Board. E. R. CHRISMAN 541
Coil Spring and Shock Absorber Under Seat of Farm Tractor Eases Work of Driver 153
Combinations Involving Similar Objects. BROTHER U. ALFRED 599
Conics Are Fun. NORMA SLEIGHT 787
Conic Sections, Illustrating the. WALTER H. CARNAHAN 313
Convention, Our 1945. WALTER H. CARNAHAN 687
Convention Program, Our 1945. WALTER H. CARNAHAN 593
Cosmic Rays in Pamir Mountains, Russian Expedition to Study 39
Costly Colds 614
Critique of Science, A. CARROLL D. W. HILDEBRAND 395
Cross-Figure Puzzle. JESSIE R. SMITH 576

D

Demonstration Lesson Using the Film, "The Corn Farmer." LUCILLE KENNEY 447
Density Plummet Thermometers. C. E. LLOYD 470
Dentists, Dietitians, Medical Social Workers Wanted: 806
Doctoral Dissertations 167
Double Stars, Miniature. E. M. TINGLEY 310
Downing, Elliot Rowland. W. L. BEAUCHAMP, O. D. FRANK, JOHN C. MAYFIELD 101
Drawing with Ruler and Paper. ADRIAN STRUYK 211
Drug Labels Must Say What They Mean 882
Drugs of Ours, Those. FREDERICK F. YONKMAN 118

E

Earth Science, Estimating the Rate of Transportation of Rock Material by a Creek as a Project in. VICTOR E. SCHMIDT 606
Earth Science in the High Schools. GEORGE A. THIEL 497
Eastern Association of Physics Teachers. One Hundred Fifty-Eighth Meeting —CARL W. STAPLES, Secretary 376

The Physical-Chemical Characteristics of Some of the Proteins of Human Plasma—L. E. STRONG 377
Dehydration of Food—S. C. PRESCOTT 378
Eastern Association of Physics Teachers. One Hundred Fifty-Ninth Meeting —CARL W. STAPLES, Secretary 660
How Fast Sound—ANNA E. HOLMAN 661
Some Unusual Magazine Articles—KENNETH L. GODING 662
The Requirements to Teach Physics. The A.A.P.T. Report—HOMER W. LESOURD 663
Fifty Years Ago—FRED R. MILLER 663
Atom Smashing and Its Modern Applications—ROBLEY D. EVANS 665
One Way of Teaching Acceleration—CLARENCE W. LOMBARD 668
Applications of Low Frequency Currents in the Practice of Podiatry—HARVEY ATKINSON 672
Electric Flatiron, Cordless 117
Electronic Device, New 756
Electronic Glassware 452
Electron Tubes, New Miniature 578
Engine Develops 700 Horsepower, Uses Inexpensive Low-Octane Fuel, New 7-Cylinder 592
Engines in Heavy Trucks Recommended, Two 309
English Comes First in New U. S. Pharmacopoeia 550
Expedition to Nyasaland 716

F

Fern—A Science Fantasy, The. ELIZABETH STOUGHTON RAWLS 595
Fibers 405
Field, Alfred C. W. F. WILLARD 104
Fifty Years Ago. FRED R. MILLER 663
Film Catalog, A New 592
Flashlight, A New 20
Flying Laboratory Tests 435
Foods, Dehydration of. S. C. PRESCOTT 378
Forest Fire Danger, Measurement of. ROY DUBISCH 729
Function Concept in the Solution of Problems of Elementary Algebra, The. JACOB M. KINNEY 693
Fundamentals of High School Mathematics, Mastery of the. A Graduation Requirement. E. R. BRESLICH 743, 807

G

Gas Turbine Laboratory at M.I.T., A New 818
General Mathematics, A First-Day Suggestion for. ELMO N. STEVENSON 493
General Mathematics, The Preparation of Teachers of. G. H. JAMISON 249
General Science, A Three-Level Assignment for. JOHN J. COCHRANE 523
General Science, Trends, Deficiencies, and Challenges Related to. J. S. RICHARDSON 202
Geometric Goldbricks. JEROME ROSENTHAL 472
Glass Transmitting More Ultraviolet Light Promised 325
Guayule—An American Source of Rubber. CLINTON H. HOBBS 615
Guide to the Evaluation of Educational Experiences in the Armed Services 197

H

Haversines in Plane Trigonometry. LUISE LANGE 552
Health Centers in Every Community 264
Health Education, New Publication on 806
Heath, D. C., and Company Celebrate 527
Hessler, John Charles. GLEN W. WARNER 103
High School Mathematics, Group Work in. CARL W. PHELPS 439
High School Mathematics? What is Going to Become of. WALTER H. CARNAHAN 463
High Vacuum Research Fellowship Established 542

I

Indian Medicine. JOHN S. WRIGHT 329

Individualized Work in General Science and Biology Laboratories, Some Suggestions for. PAUL F. BRANDWEIN 704
Induced Current Demonstration. F. W. MOODY 229
Industrial Research for India 739
Inlays in Teeth Change Chewing Habits, Built-Up 408
Invader Fighter-Bomber, Army's A-26 82
Iterated Trigonometric Functions, Theory of, Part I, The Iterated Sine. W. RAYMOND GRIFFIN 341

J

Jobs for Blind Typists 176
Jobs in Public Health Nursing, Book Illustration, Real Estate, Postwar 190
Jobs, Postwar 622
Junior Colleges on Military Training, The 496

K

Kuriles and the Ryukyu Islands, The 692

L

Latin to Take Second Place in New Pharmacopoeia 328
Leaf-Color Chart Helps Orchardists to Get Redder Apples, New 306
Liars and Statisticians. HARRY S. POLLARD 569
Librarianship, Careers in Special. BETTY P. ARPER 557
Life for the Study of Life. SISTER M. STANISLAUS COSTELLO 554
"Lift," Introduction to. HAROLD Z. HARRIS 792
Little, Brown and D. C. Heath and Company Make Reciprocal Arrangement 309

M

Magazine Articles, Some Unusual. KENNETH L. GODING 662
Magic Squares and Cubes. WILLIAM E. BLOCK 839
Mathematicians Have Agreed. CHARLES SALKIND 785
Mathematics and Science in a Liberal Education. MARK H. INGRAHAM 128
Mathematics Classroom, Notes from a. JOSEPH A. NYBERG 83, 173, 372, 443, 643, 770
Mathematics Curriculum and Post-War Planning, Attitudes Toward the. MAURICE L. HARTUNG 273
Mathematics Editor, GEORGE E. HAWKINS NEW 62
Mathematics Editor, Professor H. C. CHRISTOFFERSON, New 100
Mathematics for All and the Double Track Plan. HARL R. DOUGLASS 425
Mathematics, Selling. WALTER H. CARNAHAN 148
May Were November, If. WALTER H. CARNAHAN 297
Metropolitan Detroit Science Review 117
Mexican Volcano in Helicopter, Over. CHRISTINA BUECHNER 605
Midgley, Thomas, Industrial Chemist 44
Milk, Civilians Drink More 412
Modern Languages for Careers in Science, The Value of. ALLEN G. RING 457
Motion Picture as An Aid in Geographical Instruction, The. WILLIAM M. GREGORY 223
Motor Variants, Two Laboratory. ELBERT C. WEAVER 598
Mountcastle, Harry William, Retires 686

N

Newcomen's Steam Engine, A Glass. C. E. LLOYD 727
Number System Through Place Value, Developing an Understanding of Our. JOHN A. MORTON 870

O

Occupational Index 172
Ohm's Law and Internal Resistance of Cells. GEORGE ANTONOFF 713

P

Pamphlets and Charts, The Storage of. J. S. RICHARDSON 757
Pandiagonal Magic Squares on Square Bases and Their Transformations. HIRAM B. LOOMIS 315

Paper Cans, Motor Oil in 765
Paper Furniture 765
Peace for Germany, Psychologist Warns Against "Soft" or "Hard" 61
Penicillin is Not "Cure-All" 583
Periodic Table for Chemistry, A Blank. ROBERT H. LONG 406
Pets in the Kindergarten. VIOLA M. LYNCH 828
Pharmacy Colleges Aid Medical Research 553
Photometer, A New 672
Place Value in Second and Third Grade Arithmetic, Developing an Understanding of. H. VAN ENGEN 409
Plane Geometry, Predicting Accomplishment in. ROBERT A. DAVIS, and MARGUERITE HENRICK 403
Podiatry, Applications of Low Frequency Currents in the Practice of. HARVEY ATKINSON 672
Poland Will Become More Important as Manufacturing Nation 685
Polarizing Microscope, New Spencer 686
Power for War. C. M. RIPLEY 1
President's Message to Congress January 9, 1945, Notes from the 312
Problem Department. G. H. JAMISON 89, 191, 282, 381, 482, 580, 774, 874
Projectiles in Miniature. A. P. HEFLIN 501
Propeller-Drive and Jet Propulsion Features New Navy Fighting Plane, Combination of 827
Proteins of Human Plasma, The Physical-Chemical Characteristics of Some of the. L. E. STRONG 377

Q

Quiz Section, The. A New Department on Trial. JULIUS SUMNER MILLER 579, 659, 869

R

Radar—The Invisible Eyes of War—Will Safeguard Civilian Life in Peace-Time. ROBERT N. FARR 436
Radio in Post-War Education. NATHAN A. NEAL 154
Reading in Mathematics, The Problems of. WALTER I. MURRY 54
Refrigerated Package for Front Line Troops 147
Refrigerators to Carry Food to American Soldiers in South Pacific, New Floating 462
Replica Gratings for Scientific Rainbows Better than Originals 26
Requirements to Teach Physics, The. The A.A.P.T. Report. HOMER W. LESOURD 663
Rifle Barrels Deflects Plane's Compass, Air Cargo of 322

S

Sales Manager for Silver Burdett, A New Eastern 20
Sandpaper a Recent Project 742
Sandpaper Coated Electrically 791
Scholarships Awarded Science Talent Search Winners, $93,500 in 53
School Census, Compulsory Education, and Child Labor, New State-by-State Study on 712
Schools for Tomorrow, Planning 314
School War Savings 127
School War Savings Top $1,767,000,000 to Date 873
Science, A Historian Views. LOUIS MARTIN SEARS 356
Science and Mathematics in Army Service. CAPTAIN DANIEL C. MCNAUGHTON 105
Science and Mathematics to Post-War Conditions and Needs, Adapting Instruction in. HARL R. DOUGLASS 62
Science Courses be Taught Scientifically? Can. DAVID APTAKER 33
Science Developments of Year 1944 Picked by Science Service Director, Ten Important 222
Science in a New World. ANDREW LEITCH 367
Science in the Education of the Consumer, The Place of 540
Science—Mathematics—Industry. TRAVER C. SUTTON 560

Science or Mathematics Teacher in Meeting the Needs of the Veteran Who Returns to School, The Role of the. MAX D. ENGELHART 27
Science Review 465
Science Teaching and Science Clubs Now and Postwar. WATSON DAVIS 257
Science Teaching Film Comes to the Elementary Grades, The. W. A. WITTICH 298
Scientific Interdigitation. FREDERICK F. YONKMAN 301
Signaling by Color 672
Silver Burdett Has a Birthday 646
Sine Curves. A. R. JERBERT 168
Site of First Non Laboratory Test of Atomic Bomb Recommended as National Monument 716
Sizing for Rayon Yarns 712
Slide Rule, A Complex Quantity. G. R. SHUCK 862
Snake Tails. The Living Museum 597
Solid Reactions. LYMAN J. WOOD 623
Sound? How Fast. ANNA E. HOLMAN 661
Specific Heat and Change of State Problems, Diagrams for. H. F. COPE 326
Spicer, Chauncey E. ROBERT L. PRICE 200
Square Root. A. R. JERBERT 265
Square with Circles, Filling a. ARTHUR PORGES 858
Stars Discovered, Five New White Dwarf 553
Sterilizer for the Sick-Room, Portable 176
Student Activities. SISTER M. STANISLAUS COSTELLO 768
Subjects Taught by Science Teachers in Third Class School Districts of Pennsylvania. WILLIAM ALBERT EARL WRIGHT 45
Summer Workshops 514
Swing Music and Marching Airs Used by Airline to Train Communications Students 296
Synthetic Rubber now Full-Fledged Engineering Material 550

T

Taylor, Professor E. H., Retires 78
Teacher, The Unknown. HENRY VAN DYKE 264
Teaching Acceleration, One Way of. CLARENCE W. LOMBARD 668
Teaching Techniques for Slower Students in Army College Training Programs. G. D. MCGRATH 335
Teaching Values of the Prepared Biology Drawing Versus the Original Laboratory Drawing. I. V. TOBLER 479
Telephone Calls Without Assistance from Operators, Long Distance 882
Television, Postwar Jobs in 104
Television Seen Ready as Service to Public 198
Thermal Cloth Developed to Line Aviators' Suits and for Evacuation Blankets for Wounded 241
Thickness of Sheet Material by Folding, A Method for Determining the. F. W. SCHUELER 725
Tolerance in Science. AARON GOFF 851
Training Officers Needed 818
Transit, A Homemade. WILLIAM F. GOINS, JR. 766
Trigonometry, Some Light. ALAN WAYNE 453
Trigonometric Functions, Relations of. LEONARD THATCHER 365

U

U-Magnets, Remagnetization of. JOSEPH A. MACK 79
U. S. Airforce Transports RCA Short-wave Station from Italy to Southern France 53

V

Vitamin Demonstration Relative to Absorption, A. LEE R. YOTHERS 690

W

Warty Assistants, Our. PERCY A. MORRIS 351
Weather Forecasting, Mathematics in. JOHN G. BREILAND 279
Weckel, Ada. HAROLD H. METCALF 689
Wood Products Laboratory in Washington, New 230

Words from Me to You, A Few. WALTER H. CARNAHAN..... 99
Workbench Tops..... 703

INDEX BY AUTHORS

A

ALFRED, BROTHER U., Mont La Salle, Napa, Calif.....383, 384, 483, 484, 599, 776, 874
ANTONOFF, GEORGE, Fordham University, New York, N. Y..... 713
APTEKAR, DAVID, Mackenzie High School, Detroit, Mich..... 33
ARENA, J. F., State Teachers College, Boone, N. C..... 775
ARPER, BETTY P., Chemistry Librarian, Univ. of Illinois Library, Urbana, Ill..... 557
ATKINSON, HARVEY, Boston, Mass..... 672

B

BALDWIN, AMBER, Port Carbon High School, Port Carbon, Pa..... 87
BEAUCHAMP, W. L., University of Chicago, Chicago, Ill..... 101
BLANK, EUGENE W., Woodwild Terrace, Metuchen, N. J..... 864
BLOCK, WILLIAM E., Lake View High School, Chicago, Ill..... 839
BRANDT, HUGO, Chicago, Ill.....192, 285, 384
BRANDWEIN, PAUL F., Forest Hills High School, Forest Hills, N. Y..... 704
BREILAND, JOHN G., University of New Mexico, Albuquerque, N. M..... 279
BRESLICH, E. R., University of Chicago, Chicago, Ill.....743, 807
BREWER, GEORGE E. F., Rosary College, River Forest, Ill..... 38
BUCHMAN, AARON, Buffalo, N. Y.....91, 384, 485, 774
BUECHNER, CHRISTINA, Science Service, Washington, D. C..... 605
BURG, WALTER V., University of Toledo, Toledo, Ohio..... 307
BURLINGAME, A. L., Chicago City Junior College, Wilson Branch, Chicago, Ill..... 589

C

CAHOON, G. P., Ohio State University, Columbus, Ohio..... 189
CAPPS, F. ORLIN, Jefferson City, Mo..... 190
CARNAHAM, WALTER H., Purdue University, Lafayette, Ind.....99, 148, 199, 297, 313, 463, 593, 687
CHRISMAN, E. B., John R. Rogers High School, Spokane, Wash..... 541
CHRISTOFFERSON, H. C., Miami University, Oxford, Ohio.....386, 387, 679, 780
COCHRANE, JOHN J., Roosevelt Jr. High School, Rockford, Ill..... 523
COPE, H. F., Medford Senior High School, Medford, Oreg..... 326
COSTELLO, SISTER M. STANISLAUS, 620 W. Belmont Ave., Chicago, Ill....554, 768

D

DAVIES, W. W., United Air Lines, Inc., Chicago, Ill.....136, 215
DAVIS, ROBERT A., University of Colorado, Boulder, Colo..... 403
DAVIS, WATSON, Director, Science Service, Washington, D. C..... 257
DOUGLASS, HARL R., University of Colorado, Boulder, Colo.....62, 425
DREILUNG, MARCELLUS, Collegeville, Ind.....193, 485
DUBISCH, ROY, Montana State University, Missoula, Mont..... 729

E

EGLOFF, GUSTAV, Universal Oil Products Company, Chicago, Ill..... 112
ELDER, JOSEPH D., Wabash College, Crawfordsville, Ind..... 388
ENGELHART, MAX D., Chicago Junior College, Chicago, Ill..... 27
EVANS, ROBLEY D., Mass. Institute of Technology, Cambridge, Mass..... 665

F

FARR, ROBERT N., Science Service, Washington, D. C..... 436
FRANK, O. D., University of Chicago, Chicago, Ill..... 101
FRENCH, DOYLE T., Elkhart High School, Elkhart, Ind..... 392

G

GEISLER, WALTER, Shortridge High School, Indianapolis, Ind..... 184
GODING, KENNETH L., Attleboro High School, Attleboro, Mass..... 662
GOFF, AARON, Cleveland Jr. High School, Newark, N. J..... 851

GOINS, JR., WILLIAM F., Hampton Institute, Hampton, Va. 766
GREGORY, WILLIAM M., Western Reserve University, Cleveland, Ohio 223
GRIFFIN, W. RAYMOND, 120 Church Street, Ferguson, Mo. 341
GROSS, EUGENE W., Curtis-Wright Corporation, Montclair, N. J. 819
GROSSMAN, HOWARD D., New York, N. Y. 846

H

HARRIS, HAROLD Z., Harper High School, Chicago 36, Ill. 792
HARTUNG, MAURICE L., University of Chicago, Chicago, Ill. 273
HAWKINS, GEORGE E., Lyons Twp. High School and Jr. College, La Grange, Ill. 389, 880, 881
HEFLIN, A. P., Lane Technical School, Chicago, Ill. 501
HENRICK, MARGUERITE, University of Colorado, Boulder, Colo. 403
HILDEBRAND, CARROLL D. W., DePauw University, Greencastle, Ind. 395
HINES, V. A., University High School, Urbana, Ill. 647
HOBBS, CLINTON H., U. S. Department of Agriculture, Salinas, Calif. 615
HOLMAN, ANNA E., Winsor School, Boston, Mass. 661
HUCK, EMILIE, Twp. High School, Centralia, Ill. 185

I

INGRAHAM, MARK H., University of Wisconsin, Madison, Wis. 128

J

JAMISON, G. H., State Teachers College, Kirksville, Mo. 89, 191, 249, 282, 381, 482, 580, 774, 874
JERBERT, A. R., University of Washington, Seattle, Wash. 40, 168, 265, 528
JOHN, BROTHER FELIX, Philadelphia, Pa. 191, 383, 486, 582
JOSEPH, MARGARET, Milwaukee, Wis. 91

K

KAMBLY, PAUL E., University Elementary School, Iowa City, Iowa 798
KENNEY, LUCILLE, Public School, Lakewood, Ohio 447
KINNEY, JACOB M., 8058 Bennett Ave., Chicago, Ill. 693

L

LANGE, LUISE, Wilson City College, Chicago, Ill. 491, 552
LEITCH, ANDREW, Bethany College, Bethany, W. Va. 367
LESOURD, HOMER W., Milton Academy, Milton, Mass. 551, 663
LEWIS, A. D. M., Houston, Tex. 581
LLOYD, C. E., Williamson Central School, Williamson, N. Y. 470, 727
LOMBARD, CLARENCE W., Hyde Park High School, Hyde Park, Mass. 668
LONG, ROBERT H., Green Mountain Jr. College, Poultney, Vt. 406
LOOMIS, HIRAM B., 6119 S. Rockwell St., Chicago, Ill. 315
LYNCH, VIOLA M., Parker Elementary Practice School, Chicago, Ill. 828

M

MACK, JOSEPH A., McBride High School, St. Louis, Mo. 79
MAKIN, ALBERT R., Hartford City, Ind. 394
MARINOFF, O., Denver, Colo. 287
MARSHALL, E. G., LaSalle-Peru-Oglesby High School and Jr. College, La-Salle, Ill. 96, 97
MARTIN, W. EDGAR, University High School, Ann Arbor, Mich. 543
MAYFIELD, JOHN C., University of Chicago, Chicago, Ill. 101
MAYOR, J. R., Southern Illinois Normal University, Carbondale, Ill. 323
MCFARLAN, L. H., University of Washington, Seattle, Wash. 837
MCGRATH, G. D., Boulder High School, Boulder, Colo. 335
MCNAUGHTON, CAPTAIN DANIEL C., 3207 Martha Custis Drive, Alexandria, Va. 105
METCALF, HAROLD H., Oak Park, River Forest Twp. High School, Oak Park, Ill. 177, 681, 689
MILLER, FRED R., English High School, Boston, Mass. 663
MILLER, JULIUS SUMNER, Chapman College, Los Angeles 27, Calif. 92, 192, 579, 659, 869, 875

MOODY, F. W., Cleveland High School, St. Louis, Mo. 229
MORGAN, SAM P., California Institute of Technology, Pasadena, Calif. 282
MORRIS, PERCY A., Peabody Museum of Natural History, Yale University, New Haven, Conn. 351
MORTON, JOHN A., Bakersfield, Calif. 870
MURRY, WALTER I., Roosevelt School, Gary, Ind. 54

N

NEAL, NATHAN A., Board of Education, Cleveland, Ohio 154
NIXON, ALFRED F., Dunbar High School, Washington, D. C. 717
NYBERG, JOSEPH A., Hyde Park High School, Chicago, Ill. 83, 173, 372, 443, 643, 770

P

PEAK, PHILIP, Indiana University, Bloomington, Ind. 293, 294, 590, 678
PERISHO, CLARENCE R., McCook, Nebr. 288, 581, 582
PHELPS, CARL W., Orland High School, Orland, Calif. 439
PIEPER, HILDEGARD C., Harte School, Chicago, Ill. 184
PIERCE, E. GRIFFIN, East Technical High School, Cleveland, Ohio 231
PLASTERER, E. H., High School, Huntington, Ind. 187
POLLARD, HARRY S., Miami University, Oxford, Ohio 569
PORGES, ARTHUR, 2743 W. San Marino St., Los Angeles 6, Calif. 858
PRESCOTT, S. C., Massachusetts Institute of Technology, Boston, Mass. 378
PRICE, ROBERT L., Joliet Twp. High School, and Jr. College, Joliet, Ill. 200, 834

R

RAWLS, ELIZABETH STOUGHTON, Shortridge High School, Indianapolis, Ind. 595
READ, CECIL B., University of Wichita, Wichita, Kans. 781, 782, 783
REID, W. T., Northwestern University, Evanston, Ill. 390
RENTON, PAUL H., West View, Pa. 876
RICHARDS, WILLIAM A., Berwyn, Ill. 284, 286
RICHARDSON, J. S., Miami University, Oxford, Ohio 202, 757
RING, ALLEN G., Mallinckrodt Chemical Works, St. Louis, Mo. 457
RIPLEY, C. M., General Electric Company, Schenectady, N. Y. 1
ROSENTHAL, JEROME, 120 Airways Command Squadron, Seattle, Wash. 472
ROYT, PAULINE, Washington High School, Milwaukee, Wis. 188

S

SALKIND, CHARLES, Samuel J. Tilden High School, Brooklyn, N. Y. 785
SCHIERBAUM, ETHEL, Harper High School, Chicago, Ill. 182
SCHMIDT, JOHN H., Bakelite Corporation, 230 Grove St., Bloomfield, N. J. 96
SCHMIDT, VICTOR E., Central High School, Cobleskill, N. Y. 606
SCHREIBER, R. E., Stephens College, Columbia, Mo. 296
SCHUELER, F. W., University of Colorado, Boulder, Colo. 725
SCOTT, HELEN M., Baltimore, Md. 776, 877
SEARS, LOUIS MARTIN, Purdue University, Lafayette, Ind. 356
SHUCK, G. R., University of Washington, Seattle 5, Wash. 862
SIEMERS, H. H., Shortridge High School, Indianapolis, Ind. 294, 590
SLEIGHT, NORMA, New Trier Twp. High School, Winnetka, Ill. 21, 787
SMITH, JESSIE R., Technical High School, St. Cloud, Minn. 576
SOLIDAY, RAY C., P.O. Box 408, Oak Park, Ill. 586
SOLLBERGER, DWIGHT E., State Teachers College, Indiana, Pa. 740
STAPLES, CARL W., Chelsea High School, Chelsea, Mass. 376, 660
STEVENSON, ELMO N., Oregon State College, Corvallis, Oreg. 493
STRONG, L. E., Harvard Medical School, Harvard, Mass. 377
STRUYK, ADRIAN, Clifton High School, Clifton, N. J. 211
SUTTON, TRAVER C., Cass Technical High School, Detroit 1, Mich. 560

T

THATCHER, LEONARD, Woodland High School, Woodland, Calif. 365
THIEL, GEORGE A., University of Minnesota, Minneapolis, Minn. 497
THURBER, WALTER A., State Teachers College, Cortland, N. Y. 96, 292

TINGLEY, E. M., 221 North Cuyler, Oak Park, Ill. 310
TINKLE, WILLIAM J., Taylor University, Upland, Ind. 591
TOBLER, I. V., High School, Loveland, Colo. 479
TRUMP, PAUL, University of Wisconsin, Madison, Wis. 189

U

URBANCEK, JOSEPH J., Chicago Teachers College, Chicago, Ill. 98, 197

V

VALLÉE, ALFRED, Montreal, Canada 580
VAN DORN, ESTIL B., Washington High School, Indianapolis, Ind. 392, 393
VAN ENGEN, H., Iowa State Teachers College, Cedar Falls, Iowa 409
VON QUALEN, VIVIAN D., University Elementary School, Iowa City, Iowa 798
VOORHEES, H. R., Chicago City College, Wilson Branch, Chicago, Ill. 292, 293, 391, 587, 588

W

WALDORF, G. A., Twp. High School, Waukegan, Ill. 185
WARNER, GLEN W., Chicago City College, Wilson Branch, Chicago, Ill. 95, 100, 103, 194, 196, 289, 290, 487, 488, 489, 584, 585, 673, 676, 677, 678, 680, 688, 779, 780, 781, 878, 880
WARREN, HILL, Lyons Twp. Jr. College, La Grange, Ill. 295, 881
WAYNE, ALAN, Rhodes School, New York, N. Y. 453, 777
WEAVER, ELBERT C., Phillips Academy, Andover, Mass. 598
WESSEL, JOHN P., Chicago City College, Chicago, Ill. 242, 413, 515
WILD, ROY, Durham, N. H. 193
WILLARD, W. F. 104
WILSON, HAZEL S., Annapolis, Md. 777
WITTICH, W. A., Extension Division, University of Wisconsin, Madison, Wis. 298
WOOD, LYMAN J., St. Louis University, St. Louis, Mo. 623
WRIGHT, HOWARD F., Shortridge High School, Indianapolis, Ind. 291
WRIGHT, JOHN S., Eli Lilly and Company, Indianapolis, Ind. 329
WRIGHT, WILLIAM ALBERT EARL, State Teachers College, Shippensburg, Pa. 45

Y

YONKMAN, FREDERICK F., Ciba Pharmaceutical Products Company, Lafayette Park, Summit, N. J. 118, 301
YOTHERS, LEE R., Rahway High School, Rahway, N. J. 690

Z

ZANDER, A. G., Boy's Technical High School, Milwaukee, Wis. 490, 491